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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/582,686	06/13/2006	Hiroyuki Tsukashima	128374	2215
25944	7590	09/26/2007		
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			EXAMINER TA, THO DAC	
			ART UNIT 2833	PAPER NUMBER
			MAIL DATE 09/26/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

TH

Office Action Summary	Application No.	Applicant(s)	
	10/582,686	TSUKASHIMA ET AL.	
	Examiner	Art Unit	
	Tho D. Ta	2833	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7,9-21 and 23-29 is/are rejected.
- 7) ☒ Claim(s) 8,22 and 30 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>6/13/06&8/29/07</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3, 5, 6, 9-11, 13-15, 20, 23, 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Okabe (5,980,283).

In regard to claims 1, 15, 23, Okabe discloses a connector connection structure comprising: a first connector 43 on a housing accommodating an electric device mounted in a vehicle; and a second connector 41 shaped so as to be fitted into the first connector 43 by inserting it with a force not smaller than a predetermined amount, wherein the second connector 41 has a contact joinable with a contact of the first connector 43 to be electrically connected, and the second connector 41 includes a mechanism 46 that is integral therewith for increasing a force applied by an operator for insertion.

In regard to claims 2, 10, 15, 23, Okabe discloses the mechanism includes a rod-like insertion assist member 46 connected to the second connector 41 via a fulcrum 58, the insertion assist mechanism 63, the insertion assist member 46 generates the force not smaller than a predetermined amount by applying, with its one end's position being

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restricted, a rotation force to another end, and the housing includes a restriction means 49 for restricting the position of the one end 65.

In regard to claims 3, 11, Okabe discloses the insertion assist member 46 is supported rotatably about the fulcrum 58.

In regard to claims 5, 13, 20, 28, Okabe discloses restriction means is an opening 49 provided on the housing into which the one end 65 can be inserted.

In regard to claim 6, Okabe discloses the second connector 41 is formed along a shape of the housing.

In regard to claims 9, 14, Okabe discloses another end 66 of the insertion assist member 46 is fixed to the housing after the second connector 41 has been fitted into the first connector 43.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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4. Claims 1-4, 10-12, 15-17, 19, 23, 24, 25, 27 are rejected under 35 U.S.C. 102(e) as being anticipated by Mikhail et al. (6,913,474).

In regard to claims 1, 15, 23, Mikhail et al. discloses a connector connection structure comprising: a first connector 12 on a housing accommodating an electric device mounted in a vehicle; and a second connector 36 shaped so as to be fitted into the first connector 12 by inserting it with a force not smaller than a predetermined amount, wherein the second connector 36 has a contact joinable with a contact of the first connector 12 to be electrically connected, and the second connector 36 includes a mechanism 10 that is integral therewith for increasing a force applied by an operator for insertion.

In regard to claims 2, 10, 15, 23, Mikhail et al. discloses the mechanism includes a rod-like insertion assist member 60 connected to the second connector 36 via a fulcrum, the insertion assist mechanism 54, the insertion assist member generates the force not smaller than a predetermined amount by applying, with its one end's position being restricted, a rotation force to another end, and the housing includes a restriction means 70 for restricting the position of the one end 66.

In regard to claims 3, 11, 24, Mikhail et al. discloses the insertion assist member 60 is supported rotatably about the fulcrum 62.

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In regard to claims 4, 12, 19, 27, Mikhail et al. discloses the restriction means 70 is a protrusion provided on the housing 14 and formed in a position for the one end 66.

In regard to claim 16, Mikhail et al. discloses the insertion assist member 60 is supported rotatably about the insertion assist mechanism 54.

In regard to claims 17, 25, Mikhail et al. discloses the second connector 36 is formed along a shape of the housing 14.

5. Claims 1, 7, 15, 16, 18, 19, 23, 24, 26, 27 are rejected under 35 U.S.C. 102(e) as being anticipated by Martin et al. (6,767,231).

In regard to claim 1, Martin et al. discloses a connector connection structure comprising: a first connector 22 on a housing accommodating an electric device mounted in a vehicle; and a second connector 18 shaped so as to be fitted into the first connector 22 by inserting it with a force not smaller than a predetermined amount, wherein the second connector 18 has a contact joinable with a contact of the first connector 22 to be electrically connected, and the second connector 18 includes a mechanism 14 that is integral therewith for increasing a force applied by an operator for insertion.

In regard to claim 7, Martin et al. discloses the second connector 18 is L-shaped.

In regard to claims 15, 23, Martin et al. discloses a connector connection structure comprising: a first connector 22 on a housing accommodating an electric device mounted in a vehicle; a second connector 18 shaped so as to be fitted into the first connector 22 by inserting it with a force not smaller than a predetermined amount; and a rod-like insertion assist member 14 connected, via a fulcrum, with an insertion assist mechanism 66, 67 for fitting the second connector 18 into the first connector 22, wherein the insertion assist member 14 generates the force not smaller than a predetermined amount for the second connector 18 by applying, with its one end's position being restricted, a rotation force to another end, the second connector 18 includes a contact joinable with a contact of the first connector 22 to be electrically connected, and the housing includes a restriction means 178 for restricting the position of the one end 138.

In regard to claims 16, 24, Martin et al. discloses the insertion assist member 14 is rotatably supported on the insertion assist mechanism 66, 67.

In regard to claims 18, 26, Martin et al. discloses the second connector 18 is L-shaped.

In regard to claims 19, 27, Martin et al. discloses the restriction means 178 is a protrusion provided on the housing and formed in a position for the one end 138.

6. Claims 1, 15, 21, 23, 29 are rejected under 35 U.S.C. 102(e) as being anticipated by Martin (6,644,991).

In regard to claim 1, Martin discloses a connector connection structure comprising: a first connector 25 on a housing accommodating an electric device mounted in a vehicle; and a second connector 20 shaped so as to be fitted into the first connector 25 by inserting it with a force not smaller than a predetermined amount, wherein the second connector 20 has a contact joinable with a contact of the first connector 25 to be electrically connected, and the second connector 20 includes a mechanism 15 that is integral therewith for increasing a force applied by an operator for insertion.

In regard to claims 15, 23, Martin discloses a connector connection structure comprising: a first connector 25 on a housing accommodating an electric device mounted in a vehicle; a second connector 20 shaped so as to be fitted into the first connector 25 by inserting it with a force not smaller than a predetermined amount; and a rod-like insertion assist member 185 connected, via a fulcrum, with an insertion assist mechanism 15 for fitting the second connector 20 into the first connector 25, wherein the insertion assist member 185 generates the force not smaller than a predetermined amount for the second connector 20 by applying, with its one end's position being restricted, a rotation force to another end, the second connector 20 includes a contact joinable with a contact of the first connector 25 to be electrically connected, and the housing includes a restriction means 375 for restricting the position of the one end 225.

In regard to claims 21, 29, Martin the insertion assist mechanism 15 has a member connected with the one end 225, and the restriction means is a protrusion 375 provided on the housing and formed so as to restrict the member's position.

Allowable Subject Matter

7. Claims 8, 22, 30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The following is a statement of reasons for the indication of allowable subject matter: In regard to claim 8, the prior art fails to provide, teach or suggest the insertion assist member has a groove at a predetermined angle with respect to an insertion direction of the second connector, a protrusion slidable in the groove is fixed to the housing; and in combination with all of the limitations of the base claim and any intervening claims. In regard to claims, 22, 30, the prior art fails to provide, teach or suggest the insertion assist mechanism has a member connected with the one end, and the restriction means is an opening provided on the housing into which the member can be inserted; and in combination with all of the limitations of the base claim and any intervening claims.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tho D. Ta whose telephone number is (571) 272-2014. The examiner can normally be reached on M-F (8:00-5:30).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula A. Bradley can be reached on (571) 272-2800 ext 33. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


THO D. TA
PRIMARY EXAMINER

tdt
09/17/07